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NPIC/R-61/63
April 1963

PHOTOGRAPHIC INTERPRETATION REPORT

8865

ANTIMISSILE TEST CENTER
SARY SHAGAN, USSR
CHANGES AND ADDITIONS
AS OF [REDACTED]

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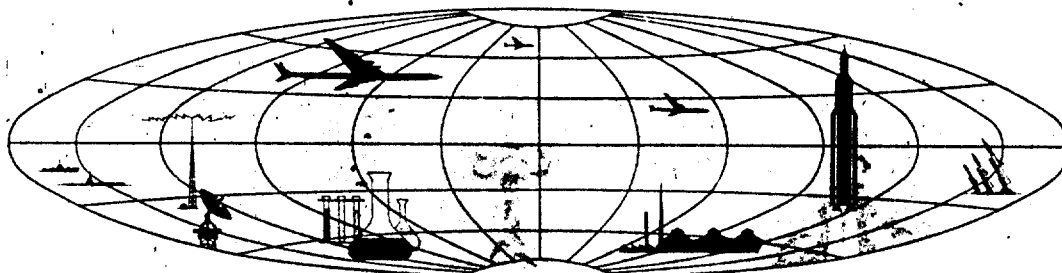
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PREFACE

This report, prepared as a result of NPIC Project JN-148/62 in answer to CIA requirements DDI/OSI/R-119/62, DDI/OSI/R-122/62, DDI/OSI/R-182/62, and DDI/RR/E/R-96/62, presents information on the Antimissile Test Center, Sary Shagan, USSR, derived from a study of [REDACTED] KEYHOLE photography. The report supplements CIA/PIC/JR-1010/61, 1/CIA/PIC/JR-3/61, 2/NPIC/R-21/62, 3/and NPIC/R-1021/62. 4/

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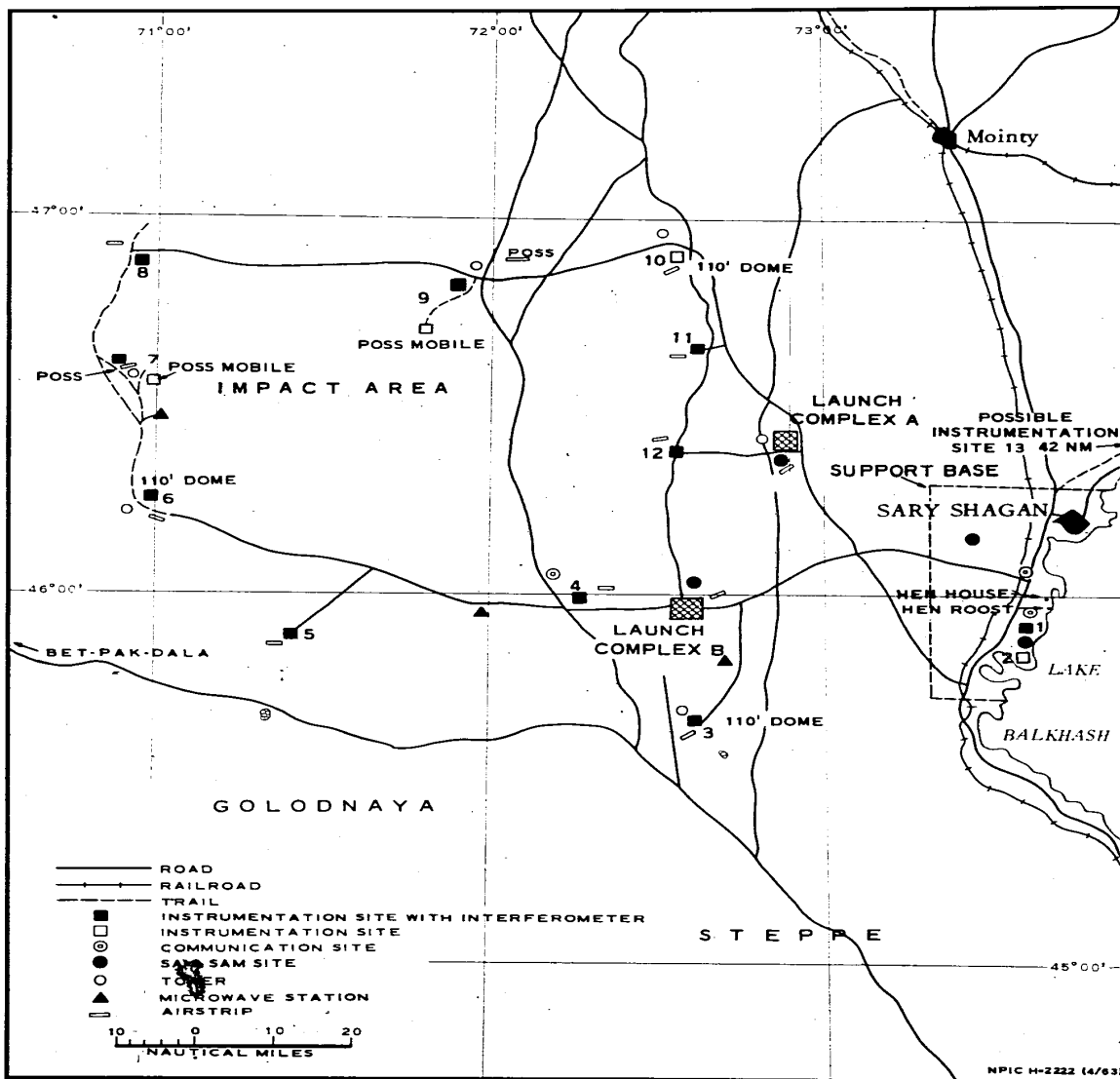


FIGURE 1. ANTIMISSILE TEST CENTER, SARY SHAGAN, USSR.

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INTRODUCTION

Photography of the Sary Shagan Antimissile Test Center from KEYHOLE [REDACTED] covers the entire center (Figure 1). The quality of the photography ranges from fair to good. No new operational complexes have been added since coverage of [REDACTED]. However, additional construc-

tion is evident at various installations in the Support Base, in Launch Complexes A and B, and in nearly all the instrumentation sites. In addition, a possible instrumentation site (Site 13) 5/ and two possible mobile instrumentation sites within the Impact Area have been identified.

SUPPORT BASE

The Support Base (Figure 2) appears essentially unchanged from coverage of [REDACTED] and all areas appear operational. Expansion, additions, or new installations have been noted in the following areas and facilities: Main Housing Complex; Test, Fabrication, Support, and Warehouse Area; Airfield, HEN HOUSE Antenna; and Instrumentation Sites 1 and 2.

MAIN HOUSING COMPLEX

Pertinent details of changes in the major components of this complex follow. Dimensions of the new structures are given in Table 1.

Housing Facilities. Eleven additional dwelling units have been erected in the New Housing

Area since [REDACTED]. The structures are located in the southeast part of the area and appear completed (Figure 3). The heating plant in the Original Housing Area appears operational.

Probable Range Headquarters/Complex Control Area. Two additional structures have been erected in the area since [REDACTED] (Figure 3). One is a new wing to the existing administrative building at the base of the U-shaped group of three administrative buildings, and the other is a large building in the northwest corner of the area. This building seems to be at least as high as existing structures in the complex and may be higher. It appears to be separated into two units at the top. External construction apparently is complete.

Table 1. Data on Newly Identified Structures in Main Housing Complex

Area	Number of Buildings	Length x Width (ft)	Stories (estimated)	Floor Space Per Bldg (sq ft)	Total Floor Space (sq ft)
New Housing Area	11	90 x 40	4	14,400	158,400
Prob Range HQ Area	1 (Wing)	110 x 55	4	24,200	24,200
	1 (Irregular shape)				
	a - base	370 x 75	4	111,000	111,000
	b - upper unit	215 x 75	3	48,375	48,375
	c - upper unit	60 x 75	3	18,000	18,000

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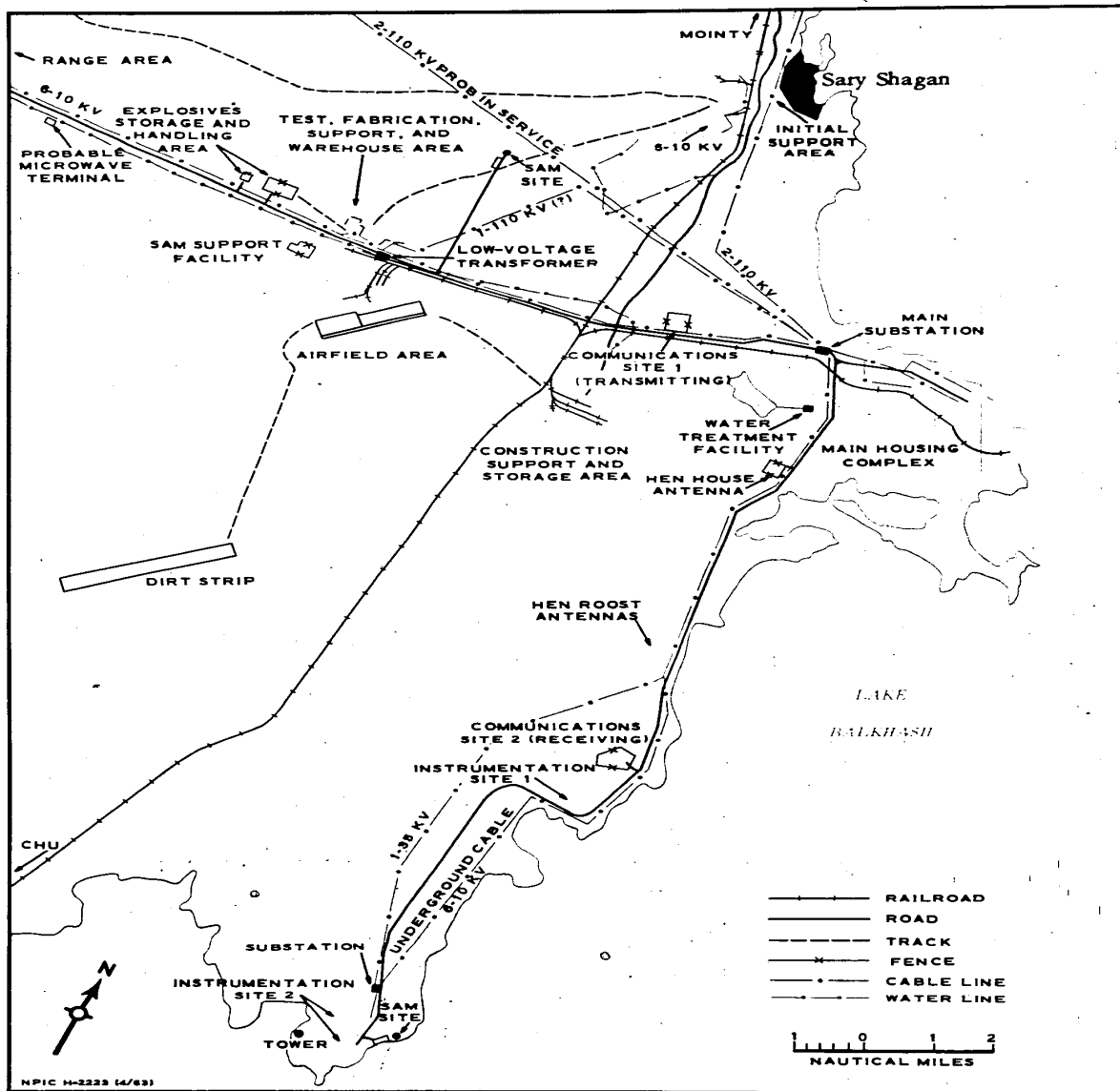


FIGURE 2. SUPPORT BASE.

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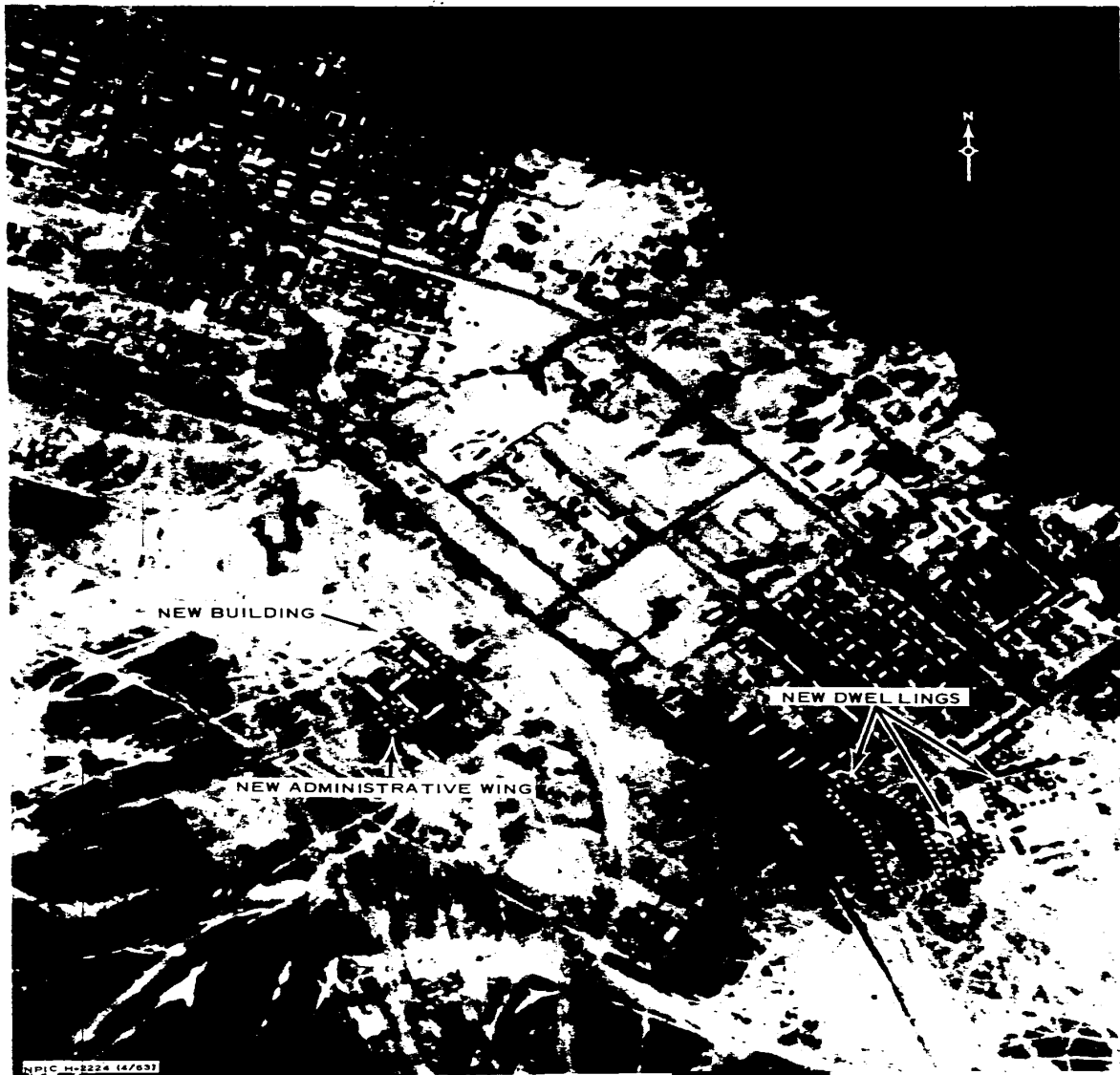


FIGURE 3. MAIN HOUSING COMPLEX

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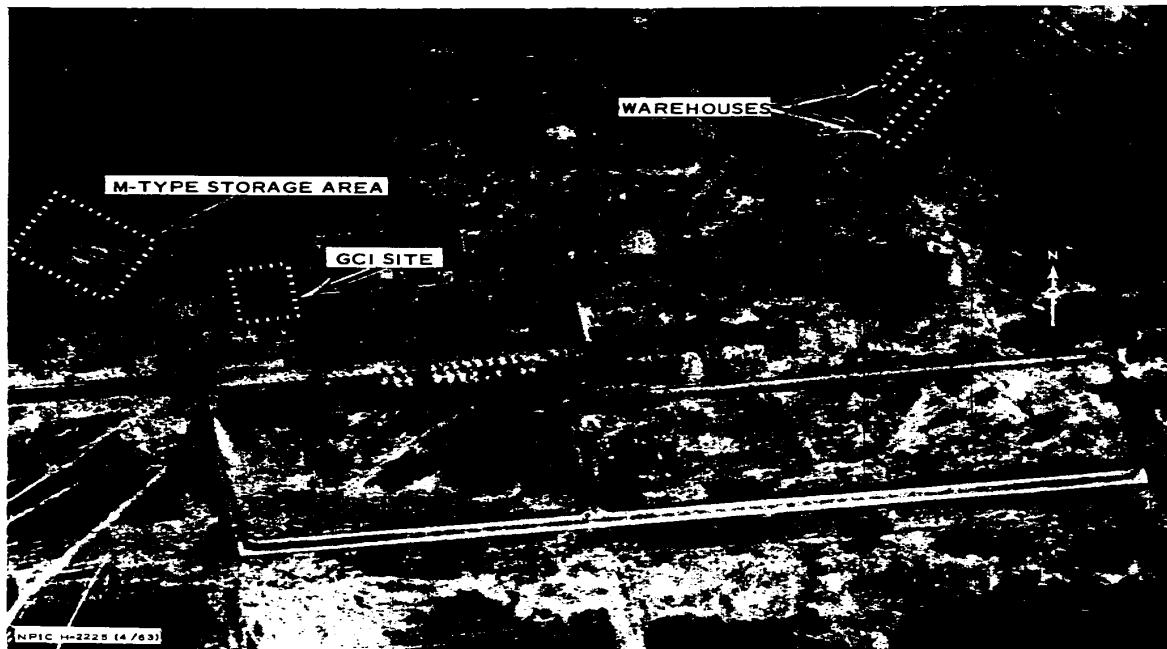


FIGURE 4. AIRFIELD AND NEARBY FACILITIES

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**TEST, FABRICATION, SUPPORT,
AND WAREHOUSE AREA**

No change is evident in the Test, Fabrication, and Support Facilities. In the Warehouse Facility, a new rail siding has been added to the spur line from the Mointy-Chu rail line. The new siding is located just to the east of the existing sidings. A 1,000-foot section of the facility's eastern fence line has been extended approximately 200 feet farther east; the new rail siding enters the facility from the north and continues approximately 500 feet into this new area. Two new probable warehouses appear to be under construction on the west side of the new siding and four possible warehouse-type structures are

apparently under construction on the east side of the new siding (Figure 4).

AIRFIELD AND NEARBY FACILITIES

An M-type storage area 6/ is now located approximately 1,700 feet north of the taxiway/parking apron (Figure 4). This area may be operational, although a definite road pattern is not present on the [redacted] photography. A GCI site consisting of at least three radars--located east of the M-type storage area--has also been added to the airfield. In addition, the previously reported cleared area at the southwest edge of the taxiway/parking apron extension has been identified as a firing-in butt.

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FIGURE 5. POSSIBLE STORAGE AREA UNDER CONSTRUCTION

POSSIBLE STORAGE AREA

A possible storage area, under construction, is located approximately 1.5 nm southwest of the microwave station. The area is somewhat similar in appearance to the storage/support facilities related to each of the four deployed SA-2 SAM sites at the center. First observed under construction in [REDACTED] the Possible Storage Area now consists of a road-served clearing, 960 by 270 feet, containing three possible storage buildings (Figure 5). The buildings--approximately 150 by 60 feet, 120 by 60 feet, and 60 by 50 feet--appear to consist of walls only. The area does not appear to be fenced.

HEN HOUSE ANTENNA

The antenna structure, the adjoining control building, and the unidentified fenced site in the southwest corner of the area appear unchanged. Some changes have been noted in the support structures. The heating plant has been enlarged, several small structures have been added immediately southwest of the heating plant, and two structures have been erected in the area previously occupied by the batch plant. In addition, an earth scar or ditch--extending approximately 2,000 feet to the northwest--has been noted on [REDACTED] photography north of the security fence of the antenna building. This scar or ditch ter-

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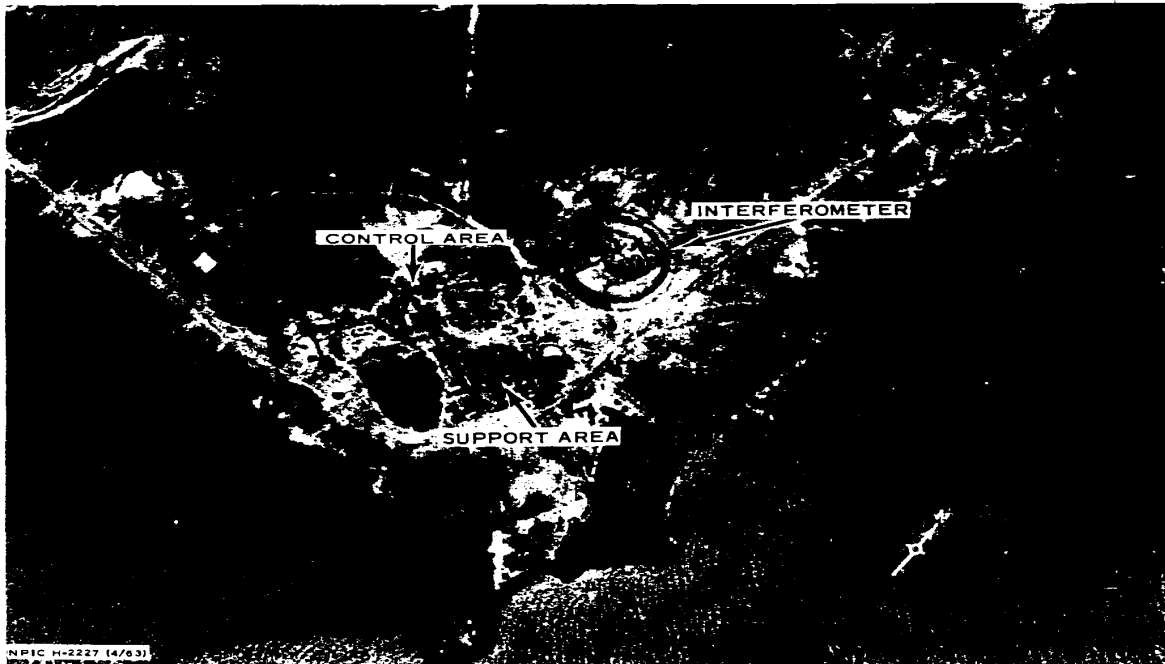


FIGURE 6. INSTRUMENTATION SITE 1

minates in a large cleared area or possible excavation which contains a possible structure. At the southern end of the scar or ditch is a possible buried tank, located among the support buildings of the HEN HOUSE Antenna.

A newly identified possible instrumentation site is located approximately one nm south-southwest of the HEN HOUSE Antenna. It consists of a road-served area containing three small possible buildings and an adjacent scarred area approximately 400 feet in diameter.

HEN ROOST ANTENNAS

No new facilities have been added to the HEN ROOST Antennas since [REDACTED] and none appear to be under construction. However, a re-

evaluation of [REDACTED] of HEN ROOST SOUTH discloses a ground clearing on the west side of the antenna extending for approximately 1,400 feet. The width of the clearing--approximately 800 feet--equals the combined width of the antenna and the control building. Indications of this activity were present on photography of [REDACTED]. The concrete structure underneath HEN ROOST SOUTH appears to have a slight curvature, suggesting a possible curvature to the reflector screen.

INSTRUMENTATION SITE 1

This site shows considerable change since the last clear coverage of [REDACTED]. Changes include the addition of 12 buildings in the support

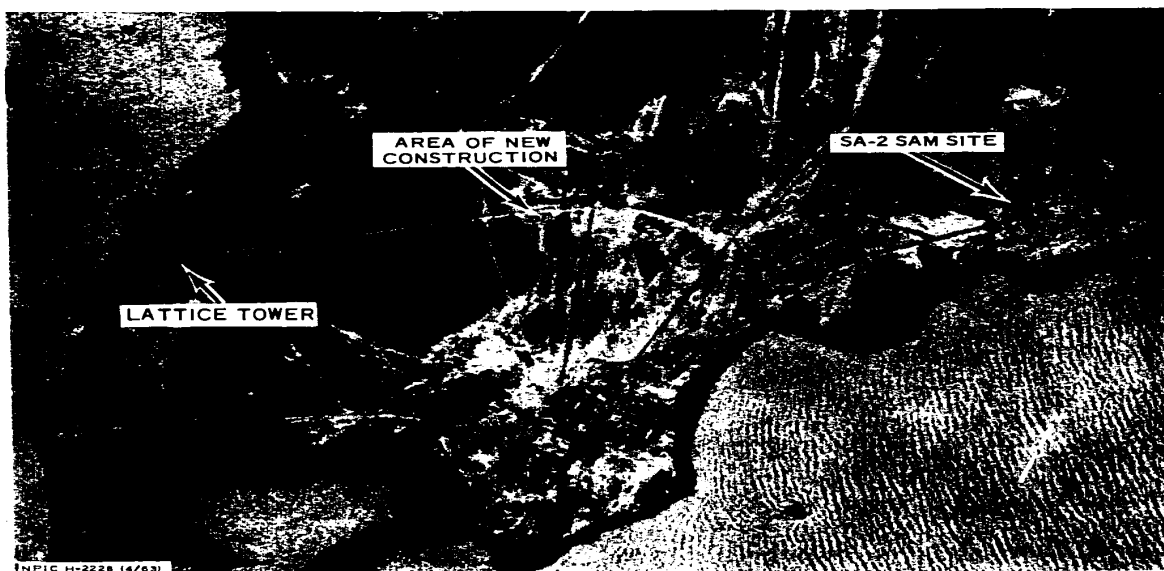


FIGURE 7. INSTRUMENTATION SITE 2

area and at least 3 in the control area (Figure 6). The interferometer appears to be undergoing reconstruction. The crossarms are not visible on [REDACTED] photography, but an increase in the number of small plowed or scarred patches in the mounded area of the interferometer is apparent.

Approximately 1,200 feet southwest of the interferometer and near the control area is a small, new, possible building with a vehicular track or scarred pattern. This pattern suggests the possible building is more closely associated with the control area than with the interferometer. This possible building is located adjacent to the ditch or possible cable line which was visible on [REDACTED] photography.

Throughout the control area are ditching, vehicular tracks, and other activity associated with expansion or relocation of existing facili-

ties. The rhombic antenna areas appear unchanged and do not seem to be involved in the reconstruction.

Three or four new buildings have been erected in an "L" configuration southwest of the control area on the edge of a 450-foot circular mound. No function can be ascribed to these buildings at this time.

INSTRUMENTATION SITE 2

Three structures arranged in a pattern similar to the T-shaped configurations at Instrumentation Site 10, Possible Instrumentation Site 13, and Launch Complex B have been added to the radar operations area of Instrumentation Site 2 (Figure 7). 5/ A reexamination of earlier photography of [REDACTED] has disclosed the outlines of two of these buildings, measuring 150

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feet square, indicating that construction had commenced by that time. The third, larger building is still under construction. Another 150-foot-square building, apparently complete, has been erected north of the previously reported T-shaped building.

COMMUNICATIONS SITES

No changes are visible at Communications Sites 1 and 2--located in the Support Base--or Communications Site 3--located about 16 nm

west of Launch Complex B. A possible airstrip is under construction south of Communications Site 3.

SA-2 SAM SITES

The four deployed SA-2 SAM sites--two in the Support Base and one each at Launch Complexes A and B--appear complete and operational. Each site has a probable storage/support facility consisting of one large revetted building and four smaller buildings located adjacent to it.

LAUNCH COMPLEX A

Only changes within the Headquarters and Administrative Area will be discussed in this report. A detailed description of the launch and missile storage and checkout facilities at Launch Complex A appears in NPIC/R-135/62, Anti-missile Missile Activity in the USSR, published in October 1962. 7/

HEADQUARTERS AND ADMINISTRATIVE AREA

At least 14 duplex or single housing units, a community building, and two or three long, single-story, gable-roofed buildings have been added to the housing section (Figure 8). An additional warehouse and nine small buildings have been added to the warehouse section. Most of the previously reported "zero-height" storage build-

ings were not discernible because of the small scale of the latest photography. Six barracks, two possible barracks under construction, and two small buildings have been added to the possible electronics site.

Approximately one nm southeast of the Launch Area and immediately north of the possible electronics site is an irregularly shaped dark stain or shadow. This area--including two or three buildings in the vicinity--was visible on earlier photography, but could not be identified. The appearance on photography of [REDACTED] of a ground scar or conduit leading from the north edge of the possible electronics site to the area suggests that it is possibly a waste-disposal area.

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LAUNCH COMPLEX B

LAUNCH AREA

The Launch Area shows the most significant changes. Three buildings aligned in a "T" shape have been added to this area (Figure 9). This construction is similar to facilities at Instru-

mentation Sites 2 and 10 and Possible Instrumentation Site 13. Further analysis of photography of [REDACTED] has revealed scarring in this area, possibly indicating that construction had commenced on these buildings at that time. In addition, two irregularly shaped cleared areas

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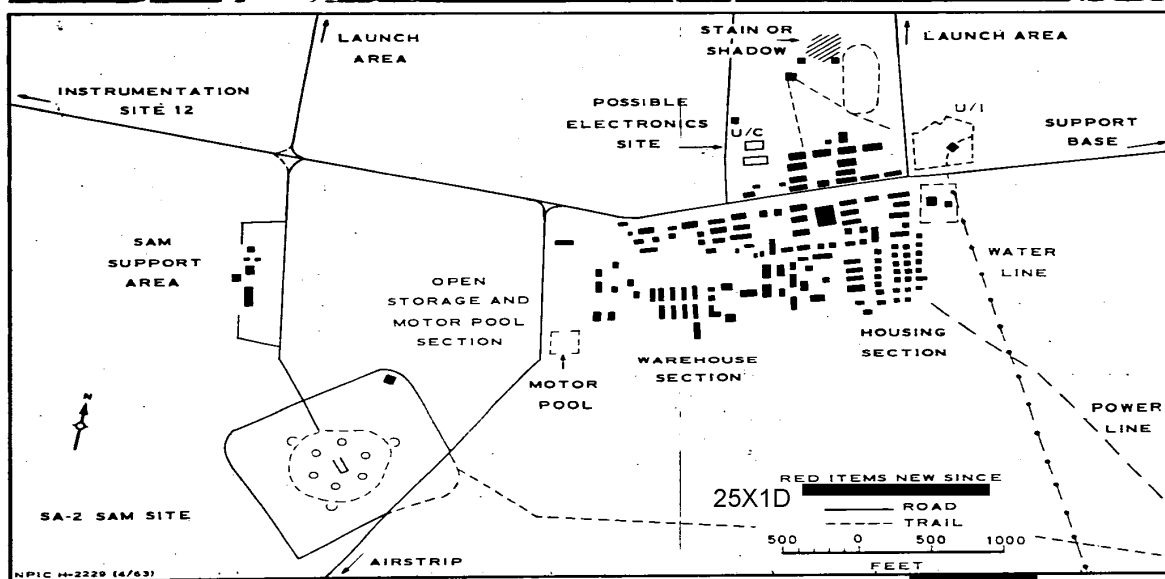
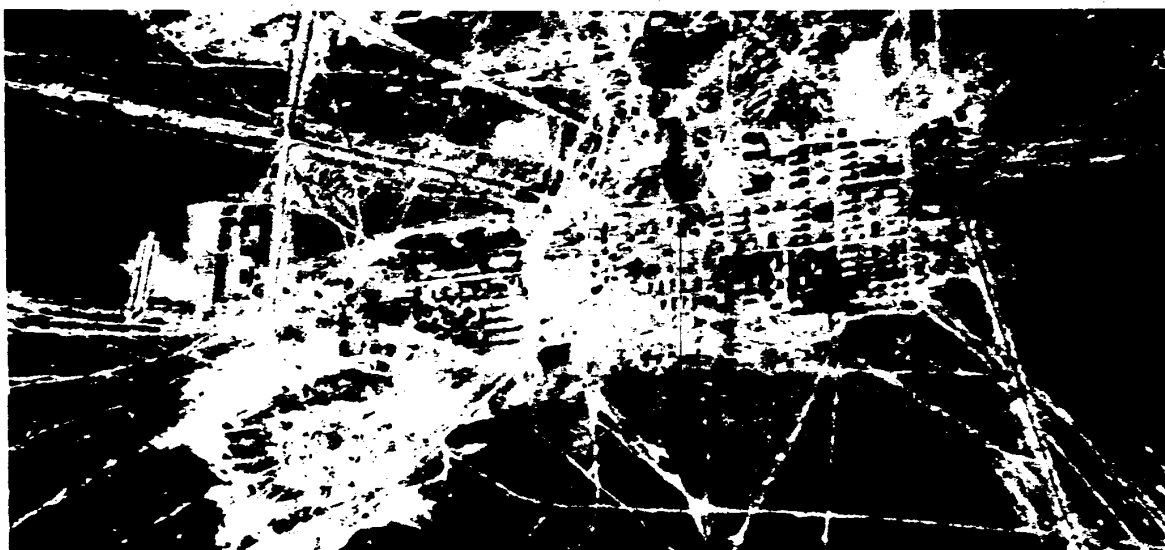


FIGURE 8. HEADQUARTERS AND ADMINISTRATIVE AREA, LAUNCH COMPLEX A

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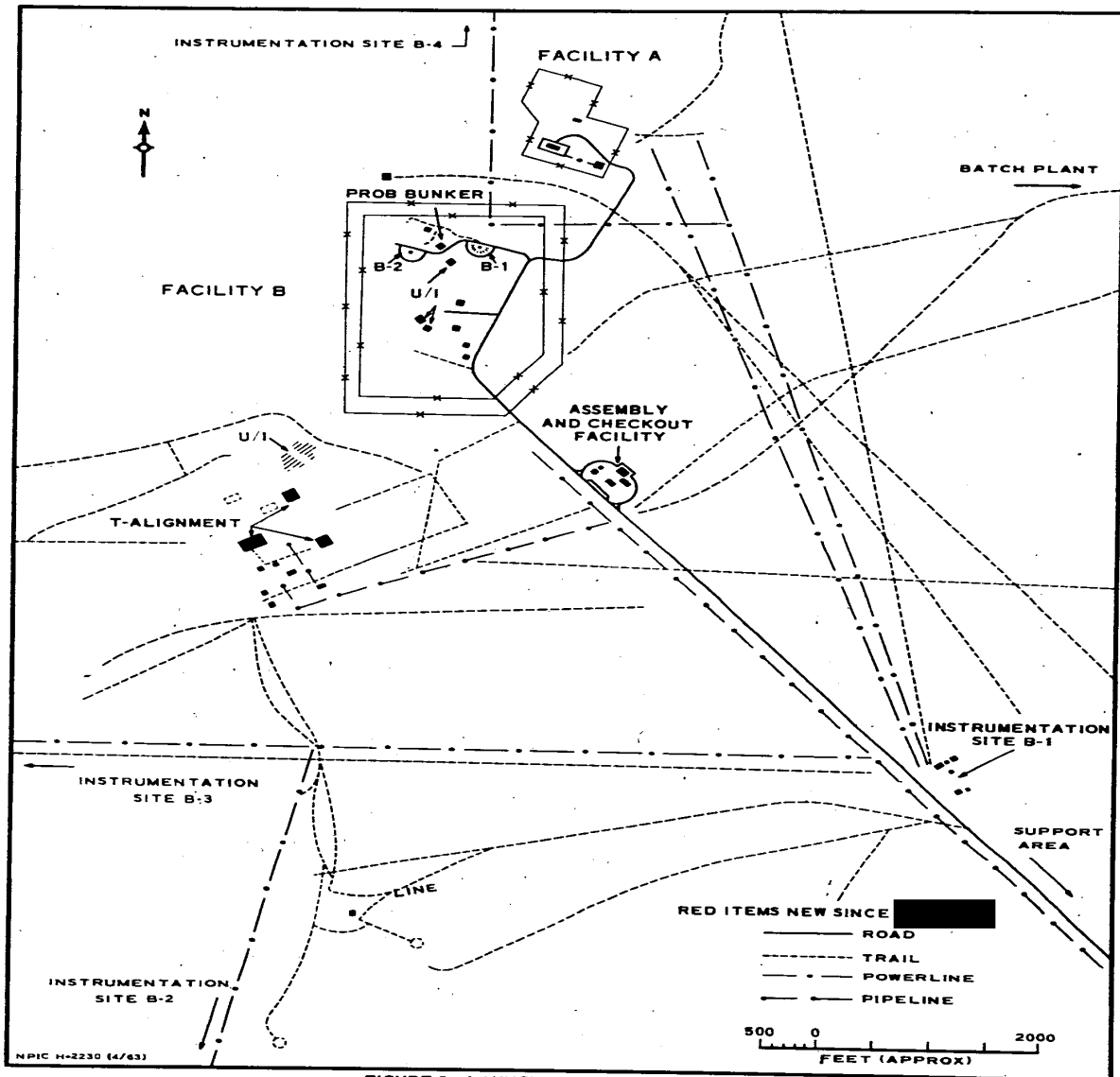


FIGURE 9. LAUNCH AREA OF COMPLEX B.

are related to these buildings by heavy vehicle track activity. No details of the activity at these cleared areas are discernible.

Facility A. The general area of this facility appears unchanged. The object in the center of the rectangular launch pad is of such vague proportions as to preclude detailed interpretation.

Facility B. Pad B-1 remains the same (Figure 10). Pad B-2, which was seen through cloud cover and on oblique photography in [REDACTED] now appears to be similar to B-1 in size only. No depth is apparent. An object appears on Pad B-2 at the same relative radial point as on Pad B-1. The height of the object cannot be determined because of the small scale of the photography. Located midway between Pads B-1 and B-2 and slightly north of them is a newly identified probable bunker about 100 feet square.

Launch Instrumentation Sites. There are no apparent changes in the four instrumentation sites--B-1, B-2, B-3, and B-4--serving the Launch Area of Launch Complex B.

SUPPORT AREA

Changes within the Support Area (Figure 11) include an expansion of housing facilities and the addition of a possible shop and several other utility buildings. These changes have been determined from [REDACTED] photography and a re-examination of [REDACTED] coverage. The components of the Support Area which contain changes are discussed below.

Probable Storage, Assembly, and Checkout Facility Under Construction (Facility A). This area either remains under construction or has been abandoned. The well-defined loop road pattern--a major feature of the area--is no longer visible on [REDACTED] photography. There is no apparent change in previously identified

structures. A possible coal pile located adjacent to the large building on the main access road suggests that this building may be a heating plant. A probable bunker has been identified in the southwest corner of the facility. Further analysis of earlier photography [REDACTED] has disclosed the presence of one large and three small buildings along the main access road. The previously reported building under construction in the vicinity of the two small bunkers appeared complete on the [REDACTED] photography. One additional building adjacent to the previously identified building north of the bunkers was identified on this earlier photography.

Motor Pools (Facilities B and J). These two motor pools are no longer visible.

Housing Facility (Facility C). Additions to this facility consist of two hip-roofed buildings, measuring approximately 140 by 60 feet, located just east of the previously reported buildings along the main access road. The buildings probably have two stories. Further analysis of [REDACTED] photography reveals that one of these buildings was complete at that time. Three buildings, measuring approximately 90 by 40 feet, located south of the junction of the main access road and the road to the Launch Area and five other probable buildings have been identified on [REDACTED] photography. All of these buildings are probably single-story structures.

Possible Technical and Laboratory Facility (Facility E). The unidentified structure under construction in [REDACTED] now appears complete and may have been completed as early as [REDACTED]. The building, measuring approximately 200 by 90 feet, is probably a shop.

Housing Facility (Facility F). Three or four small utility buildings have been added to this area.

Possible Technical and Laboratory Facility (Facility G). This facility remains marked with

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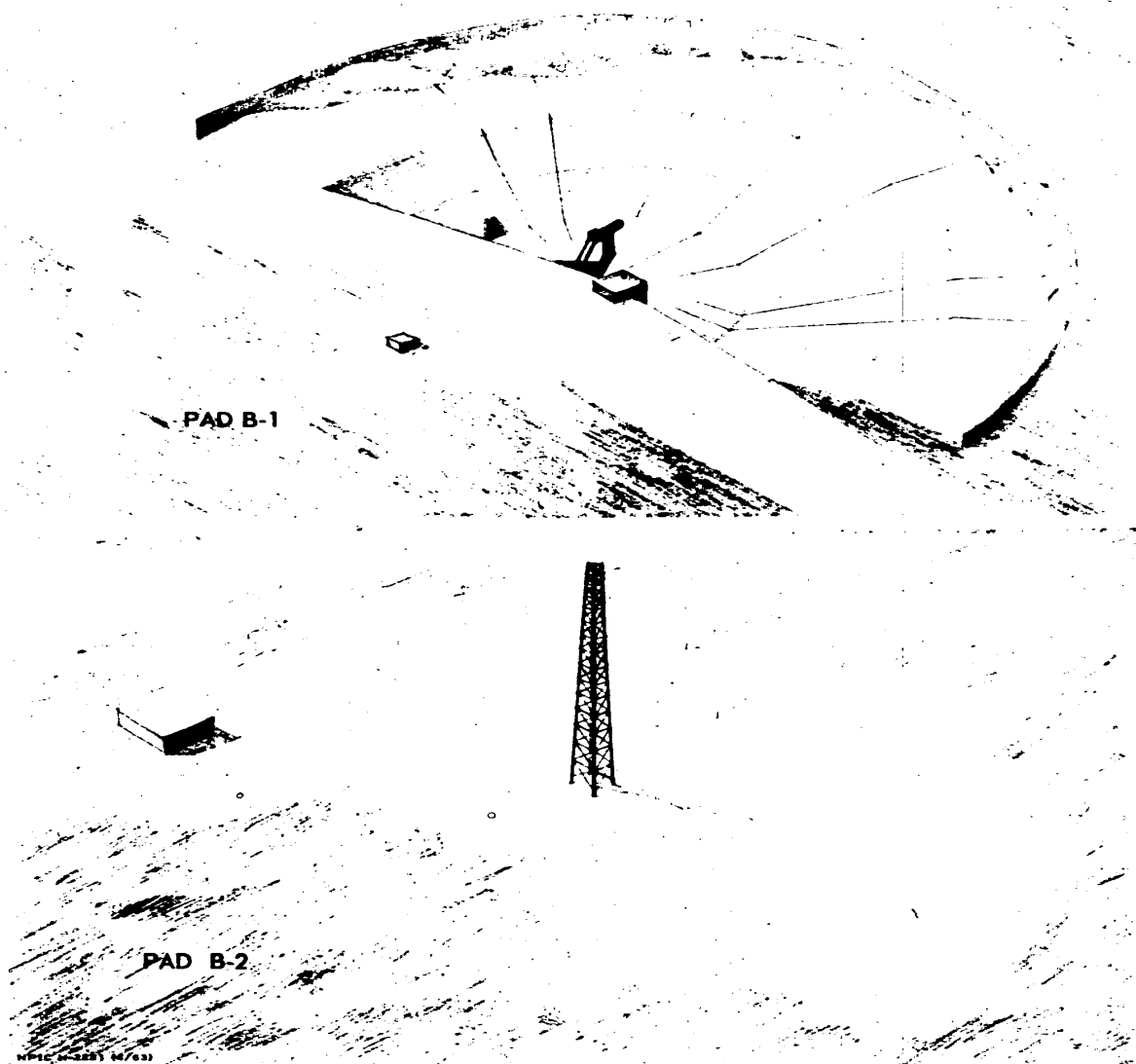


FIGURE 10. CONCEPT OF PADS B-1 AND B-2.

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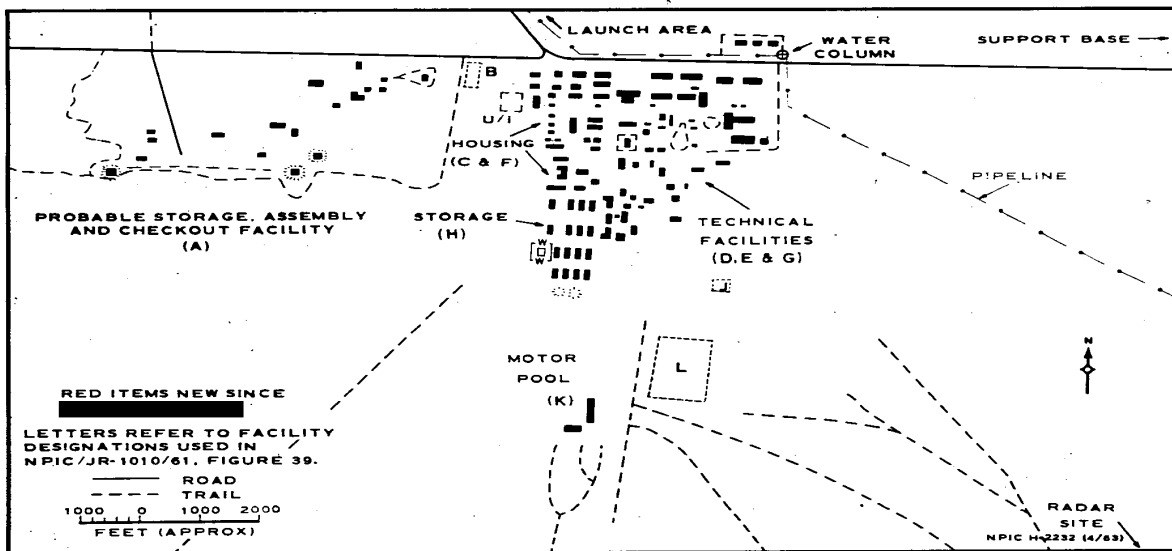


FIGURE 11. SUPPORT AREA OF COMPLEX B [REDACTED]

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heavy scarring, possibly indicating expansion or removal of existing buildings. No new buildings have been added and the area may now contain fewer structures than before.

OTHER FACILITIES

Approximately 1.2 nm southwest of the Support Area is a newly identified possible microwave station.

RANGE INSTRUMENTATION SITES

Of the ten instrumentation sites (Sites 3-12) which form a generally rectangular pattern around the Impact Area, nine now have interferometers. Site 3 is the latest site to acquire this type of instrumentation. All of the sites remain generally the same as previously reported, with varying modifications. Some of the items described below are not new but have been seen for the first time on good photography. Selected distance and bearing data on interferometer sites are given in Table 2.

INSTRUMENTATION SITE 3

Instrumentation Site 3 (Figure 12) is the second site of the 75-nm equilateral triangle formed by Sites 3, 6, and 10 to have both an interferometer and a 110-foot dome. The interferometer, begun subsequent to the [REDACTED] coverage, is located approximately 3,700 feet west-southwest of the 110-foot dome and appears to be in a late stage of construction. The cross-arms extend to the edge of the circular road. A

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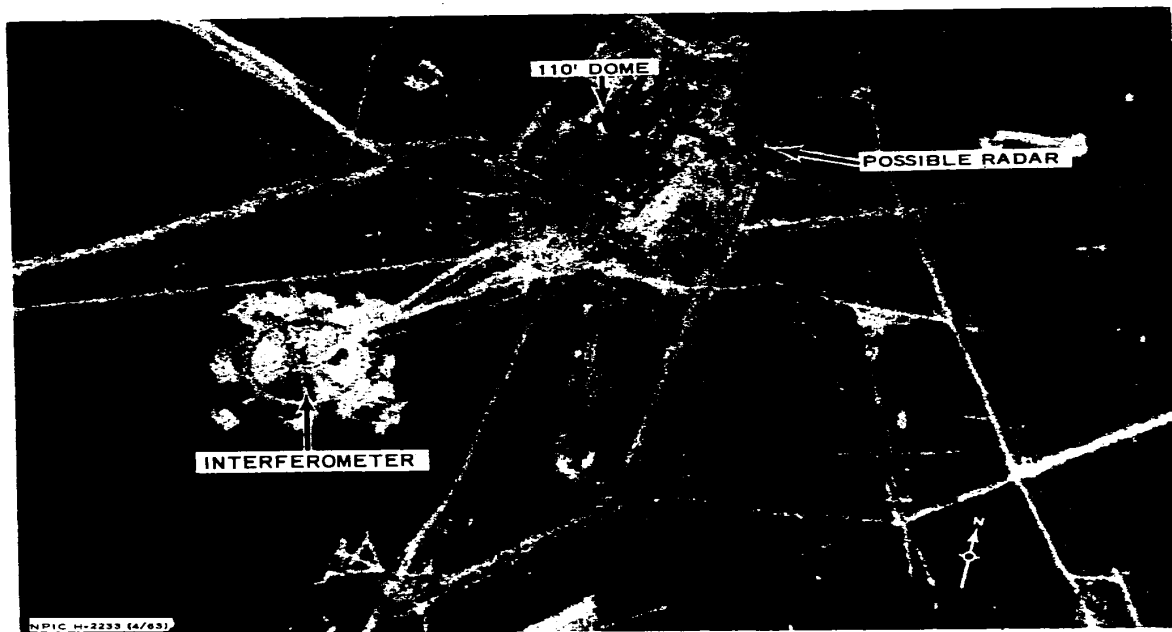


FIGURE 12. INSTRUMENTATION SITE 3 [REDACTED]

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bunker is located on the north side of the intersection of the crossarms and a possible second bunker is located south of the interferometer. In addition, a new building, approximately 100 by 55 feet, has been constructed since [REDACTED] southwest of the two large operational buildings and in line with them. A circular area about 380 feet in diameter containing one or two buildings is located approximately 2,300 feet west-northwest of the 110-foot dome. This circular area was observed on [REDACTED] photography; however, the buildings were not visible. A possible radar site--also observed on the [REDACTED] photography--is located approximately 2,000 feet east-southeast of the 110-foot dome.

INSTRUMENTATION SITE 4

The interferometer crossarms have been extended to the edge of the circular road (Figure 13). Three or four buildings have been added to the support area and an east-west airstrip has been constructed to the east of the support area. A microwave station is now located southwest of

the site. The airstrip and the microwave station were first observed on [REDACTED] photography but were not positively identified at that time.

INSTRUMENTATION SITE 5

Construction continues on the interferometer. Three legs of the crossarms extending to the circular road and a possible bunker adjacent to the intersection of the crossarms are now visible. A possible microwave station is located on the high ground south of the support area.

INSTRUMENTATION SITE 6

Photography of [REDACTED] provides the first cloud-free coverage of this site to date (Figure 14), revealing several items of primary interest. While the support area is comparable to those at Sites 3 and 10--which together with Site 6 form the 75-nm equilateral triangle--the operations area contains facilities not found at Sites 3 and 10. One of these is a second 250- by 60-foot structure with an adjacent 50-foot dome located northeast of the 110-foot dome. Although scar-

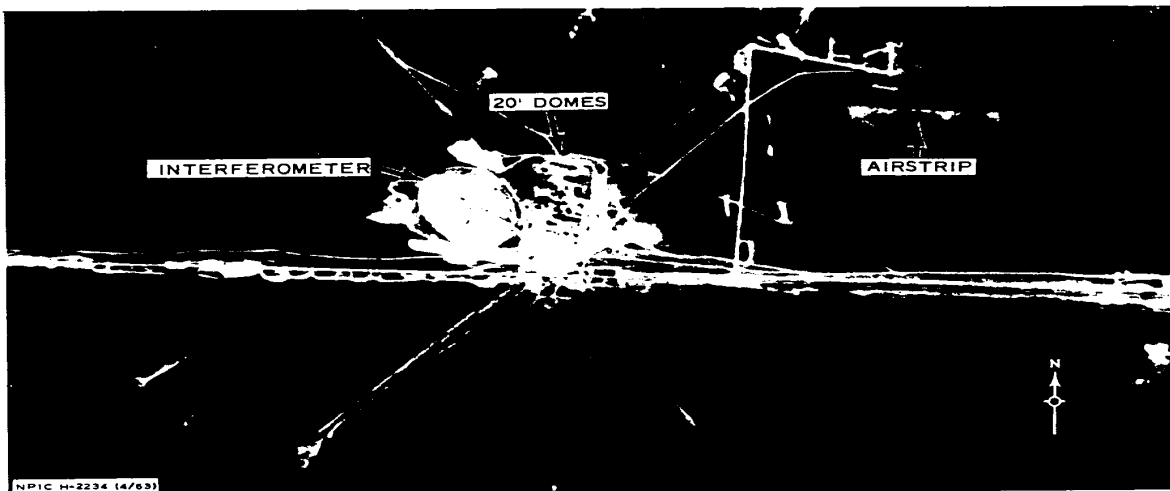
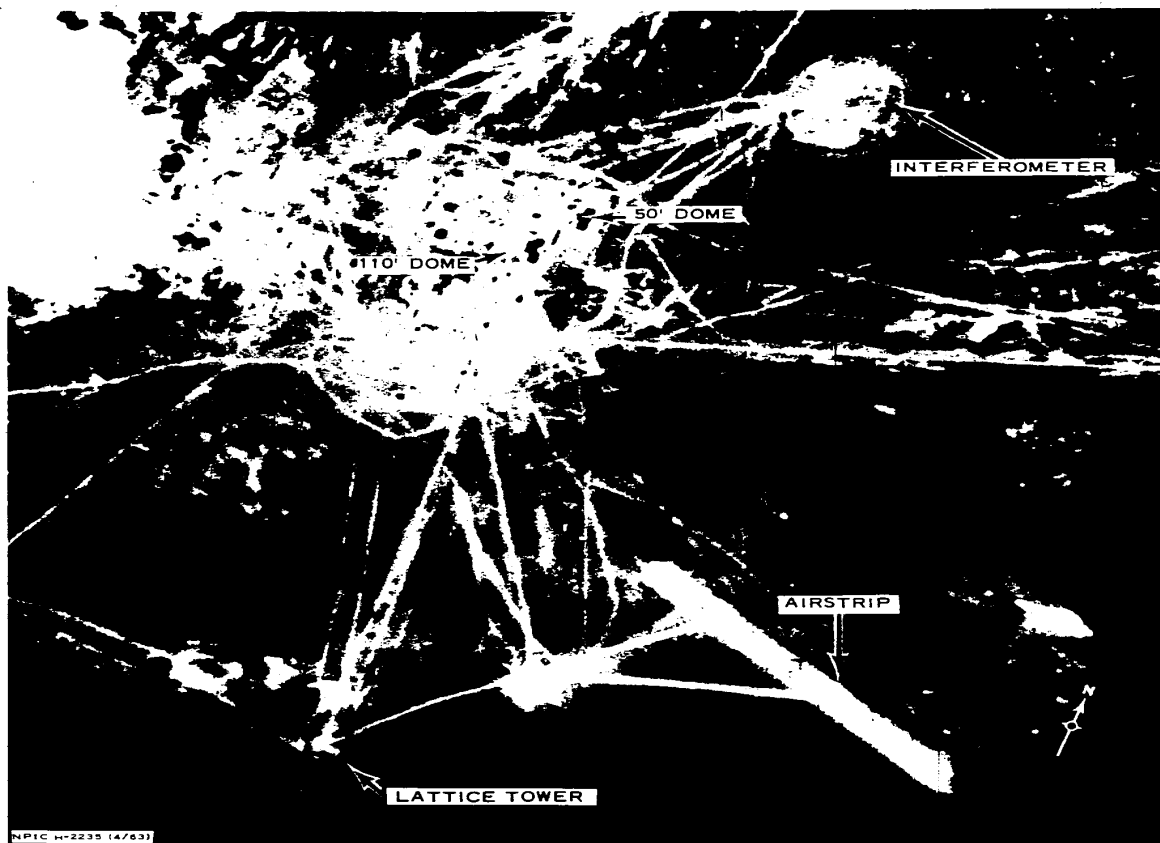


FIGURE 13. INSTRUMENTATION SITE 4

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FIGURE 14. INSTRUMENTATION SITE 6

ring is visible within the area of the interferometer, the crossarms are not discernible. A possible microwave station is located between Instrumentation Sites 6 and 7 at 46-28N 71-12E.

INSTRUMENTATION SITE 7

An additional 20-foot dome is now visible, raising to four the total of such structures at this site. The legs of the interferometer have been extended to the edge of the circular road

and a possible airstrip is under construction approximately 2.4 nm east-southeast of the interferometer.

INSTRUMENTATION SITE 8

Three 20-foot domed structures--located on the high ground northwest of the interferometer--and a large cleared area southwest of the support area--containing two possible radar mounds--have been identified on cloud-free pho-

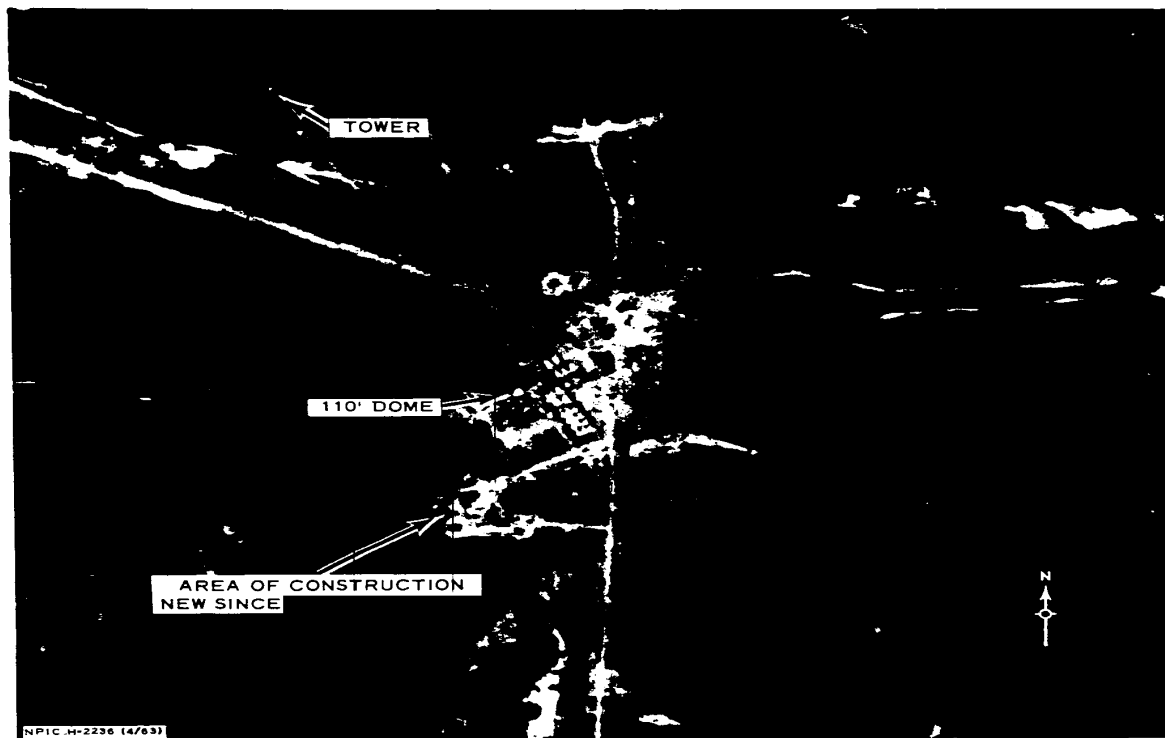


FIGURE 15. INSTRUMENTATION SITE

tography. In addition, the interferometer cross-arms now extend to the circular road and scarring is now evident around the outer edges of this road.

INSTRUMENTATION SITE 9

No apparent change is evident, but the poor quality of the photography precludes a detailed interpretation.

INSTRUMENTATION SITE 10

The previously reported 110-foot wall has been covered by a dome. Each of the sites comprising the 75-nm equilateral triangle--Sites 3,

6, and 10--now has a similar facility. The support area of the site has not changed since

is located east of the support area, across the main road (Figure 15). Located south of the 110-foot dome is a facility similar in appearance to those at Site 2 and Possible Site 13 and Launch Complex B. The 350- by 200-foot structure and the associated 150-foot-square structures appear to be under construction.

INSTRUMENTATION SITE 11

A probably graded-earth airstrip, approximately 4,500 by 600 feet, has been constructed

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since [REDACTED] The airstrip appears operational and is located 2.5 nm southwest of the support area. The visible portions of the cross-arms of the interferometer appear to extend to the circular road.

INSTRUMENTATION SITE 12

The previously reported area of ground scarring north of the housing and support area has now been identified as an airstrip. Located at the southern edge of the housing and support area are six 20-foot domed structures, one more than in [REDACTED] A newly identified possible microwave station is located approximately 1,800 feet west of the housing and support area.

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MOBILE TERMINAL RANGE (IMPACT) INSTRUMENTATION

Two newly identified possible mobile instrumentation sites are located within the perimeter road of the Impact Area. One mobile site is located southeast of Instrumentation Site 7 at 46-35N 71-00E. The other mobile site is located south of Instrumentation Site 9 at 46-40N 71-45E.

Identification of these sites is based on the road pattern which ties each site to known instrumentation sites and the physical location of the sites within the perimeter road of the Impact Area. Three possible vehicles are visible at the site southeast of Instrumentation Site 7 and two possible vehicles are visible at the site south of Instrumentation Site 9.

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TABLE 2. DISTANCE AND BEARING DATA 4 (All distances in nautical miles)



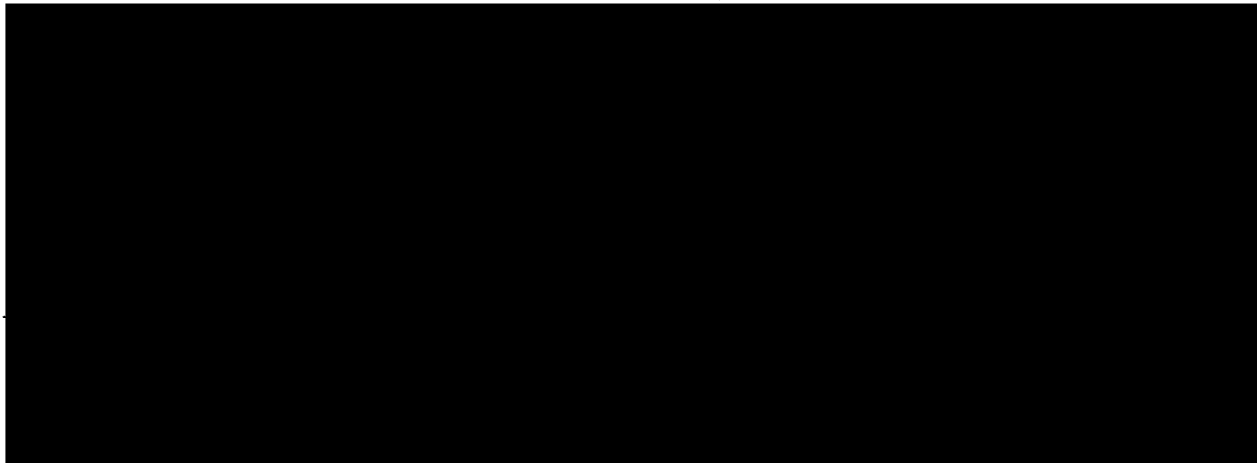
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REFERENCES



MAPS OR CHARTS

ACIC. WAC 245, 4th ed, Dec 56, scale 1:1,000,000 (UNCLASSIFIED)

DOCUMENTS

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1. CIA. PIC/JR-1010/61, Antimissile Complex, Sary Shagan, USSR, Apr 61 (SECRET/Noform [redacted] Downgrading Prohibited)

2. CIA. PIC/JR-3/61, Antimissile Test Complex, Sary Shagan, USSR. Changes Since [redacted] Apr 61 (TOP SECRET CHESS RUFF)

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3. NPIC. R-21/62, Antimissile Test Center, Sary Shagan, USSR, Changes and Additions as of [redacted] Feb 62 (TOP SECRET CHESS RUFF)

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4. NPIC. R-1021/62, Distance and Bearing Data on Interferometer Sites, Antimissile Test Center, Sary Shagan, USSR, May 62 (SECRET/Noform [redacted] Downgrading Prohibited)
5. NPIC. R-100/62, Possible Instrumentation Site 13, Antimissile Test Center, Sary Shagan, USSR, Jul 62 (TOP SECRET CHESS RUFF)

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6. NPIC. R-1001/61, M-Type Storage Sites at Soviet Airfields, Jun 61 (SECRET/Noform [redacted] Downgrading Prohibited)
7. NPIC. R-135/62, Antimissile Missile Activity in the USSR, Oct 62 (TOP SECRET CHESS RUFF)

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